

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. – 12. (Cancelled)

13. (New) A semiconductor device comprising:

a semiconductor substrate;

a gate electrode formed on said semiconductor substrate;

a diffusion layer formed within said semiconductor substrate and corresponding to said gate electrode;

a connection layer disposed above said gate electrode through an insulating layer; and

a plug connected electrically with said connection layer and said diffusion layer,

wherein said plug comprises a main conductive film and an adjacent conductive film disposed outside of said main conductive film, and

said main conductive film includes copper as a main constituent element, and

said adjacent conductive film includes as a main constituent element at least one element selected from a group consisting of rhodium, ruthenium, iridium, osmium and platinum.

14. (New) A semiconductor device according to Claim 13, wherein said adjacent conductive film includes as an added constituent element at least one element selected from a group consisting of palladium, cobalt, nickel and titanium.

15. (New) A semiconductor device according to Claim 13, wherein said adjacent conductive film includes as an added constituent element at least one element selected from a group consisting of palladium, cobalt, nickel and titanium with a concentration of not less than 0.14 at.% and not more than 25 at.%.

16. (New) A semiconductor device comprising:
a semiconductor substrate;
a gate electrode formed on said semiconductor substrate;
a diffusion layer formed within said semiconductor substrate and corresponding to said gate electrode;
a connection layer disposed above said gate electrode through an insulating layer; and
a plug connected electrically with said connection layer and said diffusion layer,
wherein said connection layer comprises a main conductive film and an adjacent conductive film disposed outside of said main conductive film, and
said main conductive film includes copper as a main constituent element, and
said adjacent conductive film includes as a main constituent element at least one element selected from a group consisting of rhodium, ruthenium, iridium, osmium and platinum.

17. (New) A semiconductor device according to Claim 16, wherein said adjacent conductive film includes as an added constituent element at least one element selected from a group consisting of palladium, cobalt, nickel and titanium.

18. (New) A semiconductor device according to Claim 16, wherein said adjacent conductive film includes as an added constituent element at least one element selected from a group consisting of palladium, cobalt, nickel and titanium with a concentration of not less than 0.14 at.% and not more than 25 at.%.

19. (New) A semiconductor device comprising:
a semiconductor substrate;
a gate electrode formed on said semiconductor substrate;
a diffusion layer formed within said semiconductor substrate and corresponding to said gate electrode;
a connection layer disposed above said gate electrode through an insulating layer; and
a plug connected electrically with said connection layer and said gate electrode,
wherein said plug includes copper as a main constituent element, and said gate electrode includes as a main constituent element at least one element selected from a group consisting of rhodium, ruthenium, iridium, osmium and platinum.

20. (New) A semiconductor device according to Claim 19, wherein said gate electrode includes as an added constituent element at least one element selected from a group consisting of palladium, cobalt, nickel and titanium.

21. (New) A semiconductor device according to Claim 19, wherein said gate electrode includes as an added constituent element at least one element selected from a group consisting of palladium, cobalt, nickel and titanium with a concentration of not less than 0.14 at.% and not more than 25 at.%.

22. (New) A semiconductor device comprising:

- a semiconductor substrate;
- a gate electrode formed on said semiconductor substrate;
- a diffusion layer formed within said semiconductor substrate and corresponding to said gate electrode;
- a connection layer disposed above said gate electrode through an insulating layer; and
- a plug connected electrically with said connection layer and said gate electrode,

wherein said plug includes copper as a main constituent element, and said gate electrode includes a first conductive film and a second conductive film disposed at a position nearer to said plug than said first conductive film, and

- said first conductive film includes silicon, and
- said second conductive film includes as a main constituent element at least one element selected from a group consisting of rhodium, ruthenium, iridium, osmium and platinum.

23. (New) A semiconductor device according to Claim 22, wherein said second conductive film includes as an added constituent element at least one element selected from a group consisting of palladium, cobalt, nickel and titanium.

24. (New) A semiconductor device according to Claim 22, wherein said second conductive film includes as an added constituent element at least one element selected from a group consisting of palladium, cobalt, nickel and titanium with a concentration of not less than 0.14 at.% and not more than 25 at.%.